What is claimed is:

1. A method of modifying the slope of sidewalls of openings created in a layer of photoresist, comprising the steps of:

providing a substrate, said substrate having been provided with semiconductor devices in or on the surface thereof, at least one layer of semiconductor material having been deposited over the surface of said substrate, said at least one layer of semiconductor material being patterned and etched for creation of additional functional capabilities of said semiconductor devices provided on the surface of said substrate;

coating a layer of photoresist over the surface of said at least one layer of semiconductor material having been deposited over the surface of said substrate;

patterning and developing said layer of photoresist, creating at least one opening through said layer of photoresist having sidewalls, said at least one opening comprising a via hole or an interconnect line trench;

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate, said second surface facing in an upward direction;

placing said hot plate in an upwards-down position, thereby facing said second surface of said hot plate in a downwards direction, said second surface of said hot plate being substantially parallel with a horizontal direction;

applying energy in the form of heat to said hot plate, thereby supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate;

continuing said application of energy in the form of heat to said hot plate for a first period of time having a measurable duration;

discontinuing said application of energy in the form of heat, thereby discontinuing supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate;

continuing said discontinuing a said application in the form of heat to said hot plate for a second period of time having a measurable duration;

placing said hot plate in an upwards position, thereby facing said second surface of said hot plate in a upwards direction, said second surface of said hot plate being substantially parallel with a horizontal direction, creating a modified layer of photoresist having openings of modified slopes of the sidewalls of said openings; and

continue conventional processing, using said modified layer of photoresist for said patterning and etching of said at least one layer of semiconductor material for creation of additional

functional capabilities of said semiconductor devices provided on the surface of said substrate.

2. The method of claim 1, said applying energy in the form of heat to said hot plate resulting in raising a temperature of said patterned and developed layer of photoresist to at least a glass transition temperature TG.

3. A method of changing Critical Dimension in a layer of photoresist that is used for the creation of device features that collectively comprise a semiconductor device, comprising the steps of:

providing a substrate, said substrate having been provided with semiconductor devices in or on the surface thereof, at least one layer of semiconductor material having been deposited over the surface of said substrate, said at least one layer of semiconductor material being patterned and etched for creation of device features of semiconductor devices created on the surface of said substrate;

creating a patterned and developed layer of photoresist having a surface over the surface of said at least one layer of semiconductor material, creating at least one opening through said layer of photoresist having sidewalls having an angle of intersect with said at least one layer of semiconductor material,

said at least one opening comprising a via hole or an interconnect line trench; and

changing said angle of intersect of said sidewalls of said at least one opening created in said patterned and etched layer of photoresist by raising a temperature of said layer of said patterned and etched layer of photoresist while placing said surface of said patterned and etched layer of photoresist under an angle with a horizontal direction.

4. The method of claim 3, whereby said raising a temperature of said layer of said patterned and etched layer of photoresist comprises the steps of:

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate;

applying energy in the form of heat to said hot plate, thereby supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate; and

continuing said application of energy in the form of heat to said hot plate for a first period of time having a measurable duration.

5. The method of claim 4, with additional steps of:

discontinuing said application of energy in the form of heat, thereby discontinuing supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate;

continuing said discontinuing a said application in the form of heat to said hot plate for a second period of time having a measurable duration.

6. The method of claim 5 with additional steps of continuing conventional processing, using said changed Critical Dimension in a layer of photoresist that is used for the creation of device features for creation of additional functional capabilities of said semiconductor devices provided on the surface of said substrate.

7. The method of claim 3, wherein said placing said surface of said patterned and etched layer of photoresist under an angle with a horizontal direction comprises the steps of:

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate, said second surface facing in an first direction; and

placing said hot plate facing in a second direction.

8. The method of claim 7, said first direction being substantially an upward direction.

9. The method of claim 7, said second direction being any direction not comprising an upward direction.

10. A method of reducing the pitch of via openings that are created through a layer of dielectric, comprising the steps of:

providing a substrate, said substrate having been provided with semiconductor devices in or on the surface thereof, at least one layer of dielectric having been deposited over the surface of said substrate, said at least one layer of dielectric being patterned and etched for creation of via openings therethrough;

creating a patterned and developed layer of photoresist having a surface over the surface of said at least one layer of dielectric, creating at least one opening through said layer of photoresist having sidewalls having an angle of intersect with said at least one layer of dielectric, said at least one opening comprising a via opening; and

changing said angle of intersect of said sidewalls of said at least one opening created in said patterned and etched layer of photoresist by raising a temperature of said layer of said patterned and etched layer of photoresist while placing said

surface of said patterned and etched layer of photoresist under an angle with a horizontal direction.

11. The method of claim 10, whereby said raising a temperature of said layer of said patterned and etched layer of photoresist comprises the steps of:

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate;

applying energy in the form of heat to said hot plate, thereby supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate; and

continuing said application of energy in the form of heat to said hot plate for a first period of time having a measurable duration.

12. The method of claim 11, with additional steps of:

discontinuing said application of energy in the form of heat, thereby discontinuing supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate;

continuing said discontinuing a said application in the form of heat to said hot plate for a second period of time having a measurable duration.

13. The method of claim 12 with additional steps of continuing conventional processing, using said changed Critical Dimension in a layer of photoresist that is used for the creation of device features for creation of additional functional capabilities of said semiconductor devices provided on the surface of said substrate.

14. The method of claim 10, wherein said placing said surface of said patterned and etched layer of photoresist under an angle with a horizontal direction comprises the steps of:

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate, said second surface facing in an first direction; and

placing said hot plate facing in a second direction.

15. The method of claim 14, said first direction being substantially an upward direction.

16. The method of claim 14, said second direction being any direction not comprising an upward direction.

17. A method of reducing the distance between adjacent interconnect line trenches that are created through a layer of dielectric, comprising the steps of:

providing a substrate, said substrate having been provided with semiconductor devices in or on the surface thereof, at least one layer of dielectric having been deposited over the surface of said substrate, said at least one layer of dielectric being patterned and etched for creation of interconnect line trenches therethrough;

creating a patterned and developed layer of photoresist having a surface over the surface of said at least one layer of dielectric, creating at least one interconnect line trench through said layer of photoresist having sidewalls having an angle of intersect with said at least one layer of dielectric; and

changing said angle of intersect of said sidewalls of said at least one interconnect trench created in said patterned and etched layer of photoresist by raising a temperature of said layer of said patterned and etched layer of photoresist while placing said surface of said patterned and etched layer of photoresist under an angle with a horizontal direction.

18. The method of claim 17, whereby said raising a temperature of said layer of said patterned and etched layer of photoresist comprises the steps of:

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate;

applying energy in the form of heat to said hot plate, thereby supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate; and

continuing said application of energy in the form of heat to said hot plate for a first period of time having a measurable duration.

19. The method of claim 18, with additional steps of:

discontinuing said application of energy in the form of heat, thereby discontinuing supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate;

continuing said discontinuing a said application in the form of heat to said hot plate for a second period of time having a measurable duration.

20. The method of claim 19 with additional steps of continuing conventional processing, using said reduced distance between adjacent interconnect line trenches in a layer of photoresist that is used for the creation of device features for creation of additional functional capabilities of said semiconductor devices provided on the surface of said substrate.

21. The method of claim 17, wherein said placing said surface of said patterned and etched layer of photoresist under an angle with a horizontal direction comprises the steps of:

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate, said second surface facing in an first direction; and

placing said hot plate facing in a second direction.

22. The method of claim 21, said first direction being substantially an upward direction.

23. The method of claim 21, said second direction being any direction not comprising an upward direction.

24. A method of reducing the pitch of via openings and the distance between adjacent interconnect line trenches that are created through a layer of dielectric, comprising the steps of:

providing a substrate, said substrate having been provided with semiconductor devices in or on the surface thereof, at least one layer of dielectric having been deposited over the surface of said substrate, said at least one layer of dielectric being patterned and etched for creation of via openings and interconnect line trenches therethrough;

creating a patterned and developed layer of photoresist having a surface over the surface of said at least one layer of dielectric, creating at least one via opening and at least one interconnect line trench through said layer of photoresist having sidewalls having an angle of intersect with said at least one layer of dielectric; and

changing said angle of intersect of said sidewalls of said at least one via opening and said at least one interconnect trench created in said patterned and etched layer of photoresist by raising a temperature of said layer of said patterned and etched layer of photoresist while placing said surface of said patterned and etched layer of photoresist under an angle with a horizontal direction.

25. The method of claim 24, whereby said raising a temperature of said layer of said patterned and etched layer of photoresist comprises the steps of:

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate;

applying energy in the form of heat to said hot plate, thereby supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate; and

continuing said application of energy in the form of heat to said hot plate for a first period of time having a measurable duration.

26. The method of claim 25, with additional steps of:

discontinuing said application of energy in the form of heat, thereby discontinuing supplying energy in the form of heat to said substrate and to said patterned and developed layer of photoresist created over the surface of said substrate;

continuing said discontinuing a said application in the form of heat to said hot plate for a second period of time having a measurable duration.

27. The method of claim 26 with additional steps of continuing conventional processing, using said reduced pitch between via openings and said reduced distance between adjacent interconnect line trenches in a layer of photoresist that is used for the creation of device features for creation of additional functional

capabilities of said semiconductor devices provided on the surface of said substrate.

28. The method of claim 24, wherein said placing said surface of said patterned and etched layer of photoresist under an angle with a horizontal direction comprises the steps of:

providing a hot plate having a first and a second surface;

mounting said substrate on the second surface of said hot plate, said second surface facing in an first direction; and

placing said hot plate facing in a second direction.

29. The method of claim 28, said first direction being substantially an upward direction.

30. The method of claim 29, said second direction being any direction not comprising an upward direction.